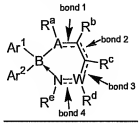
LISTING OF THE CLAIMS:

1. (Currently Amended) A method for treating a human ~~an animal~~ ~~against~~ having a DNA methyltransferase mediated, bacterium induced disease comprising administering a pharmaceutical composition comprising



including all pharmaceutically acceptable salts of such compounds, and at least one pharmaceutically acceptable carrier or excipient;

wherein A is N, O or S;

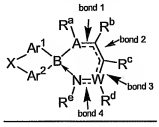
W is C_p, where p is 0 or 1;

R^a, R^b, R^c, R^d, and R^e are the same or different and are independently hydrogen, halogen, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, or wherein R^a, R^b, R^c, R^d, and R^e may be connected by aromatic, aliphatic, heteroaromatic, heteroaliphatic ring structures or substituted embodiments thereof, where R^a is absent when A is O or S and R^d is absent when p = 0;

wherein Ar^1 and Ar^2 can be the same or different and are each independently aryl or aryl substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or

cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, and

optionally Ar^1 and Ar^2 may be cojoined to create a tricyclic scaffold,



where X = C=O, CHOH, $(CH_2)_n$ (n = 0 to 2), -CH=CH-, NR^f (R^f = H, C_1-C_4 alkyl, phenyl, thienyl, or pyridyl), O, SO_n (n = 0 to 2), which have a plurality of positions with halogen, nitro, nitroso, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and

wherein bond 1, bond 2, bond 3 and bond 4 are independently a single bond or a double bond, provided that when A is S or O, bond 1 is a single bond and where A is N, bond 1 is a double bond

with the proviso that if A is O, X is not present, and Ar^1 and Ar^2 are not conjoined, then p is not 0;

to an animal in need of such treatment.

~~the step of inhibiting DNA methyltransferase activity in said bacterium, wherein said disease is caused by *Brucella* species, *Agrobacterium* species, *Rhizobium* species, or *Helicobacter* species.~~

2. (Original) The method of claim 1 wherein said DNA methyltransferase is a DNA adenine methyl transferase.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6-11. (Cancelled)

12. (Currently Amended) A method of treating a ~~mammal~~ human afflicted with a bacterium induced disease, comprising administering to said ~~mammal~~ human a therapeutically effective dose of a DNA methyl transferase inhibitor according to claim 1, wherein said DNA methyltransferase mediated, bacterium induced disease is caused by *Brucella* species, *Agrobacterium* species, *Rhizobium* species, or *Helicobacter* species.

13. (Original) The method of claim 12 wherein said DNA methyltransferase is a DNA adenine methyl transferase.

14. (Currently Amended) The method of claim 12 wherein said ~~inhibiting~~ DNA methyltransferase inhibitor ~~activity results from inhibiting~~ inhibits DNA methyltransferase enzyme activity.

15. (Cancelled)

16. (Cancelled)

17-40. (Cancelled)

41. (Cancelled)

42-43. (Cancelled)

44. (Cancelled)

45. (New) A method according to claim 1, wherein

A is N, O or S;

W is C_p, where p is 0 or 1;

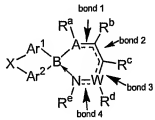
R^a, R^b, R^c, R^d, and R^e are the same or different and are independently hydrogen, halogen, lower alkyl, aryl that is phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, or phenanthryl, wherein the aryl groups are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, phenanthryl, thienyl, furanyl, thiazolyl, imidazolyl, (is)oxazolyl, pyridyl, pyrimidinyl, (iso)quinolinyl, napthyridinyl, benzimidazolyl, benzoxazolyl and hydroxy, lower alkoxy, lower alkoxyalkyl, cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and

phenanthryl or substituted aryl, wherein the aryl group is optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, phenanthryl, thienyl, furanyl, thiazolyl, imidazolyl, (is)oxazolyl, pyridyl, pyrimidinyl, (iso)quinolinyl, napthyridinyl, benzimidazolyl, benzoxazolyl and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, or

wherein R^a, R^b, R^c, R^d, and R^e may be connected by aromatic selected from phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl, aliphatic, heteroaromatic selected from thienyl, furanyl, thiazolyl, imidazolyl, (is)oxazolyl, pyridyl, pyrimidinyl, (iso)quinolinyl, napthyridinyl, benzimidazolyl, and benzoxazolyl, heteroaliphatic selected from piperidinyl, piperazinyl, morpholinyl, pyrrolidinyl, imidazolidinyl, oxazolidinyl, azepanyl, oxazaepanyl, oxepanyl, and oxadiazaepanyl ring structures or substituted embodiments thereof, where R^a is absent when A is O or S and R^d is absent when p = 0; and

Ar^1 and Ar^2 can be the same or different and are each independently phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl or phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl or phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, phenanthryl, thienyl, furanyl, thiazolyl, imidazolyl, (is)oxazolyl, pyridyl, pyrimidinyl, (iso)quinolinyl, napthyridinyl, benzimidazolyl, benzoxazolyl and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, and optionally

Ar^1 and Ar^2 may be cojoined to create a tricyclic scaffold, where X = C=O, CHOH, $(CH_2)_n$ (n = 0 to 2), -CH=CH-, NR^f (R^f = H, C_1-C_4 alkyl, phenyl, thienyl, or pyridyl), O, SO_n (n = 0 to 2), which have a plurality of positions with halogen, nitro, nitroso, lower alkyl, aryl selected from phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, and phenanthryl or aryl substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, biphenyl, 1,2,3,4-tetrahydronaphthyl, naphthyl, anthryl, phenanthryl, thienyl, furanyl, thiazolyl, imidazolyl, (is)oxazolyl, pyridyl, pyrimidinyl, (iso)quinolinyl, napthyridinyl, benzimidazolyl, benzoxazolyl and hydroxy, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and



wherein

bond 1, bond 2, bond 3 and bond 4 are independently a single bond or a double bond, provided that when A is S or O, bind 1 is a single bond and where A is N, bind 1 is a double bond.

46. (New) A method according to claim 1, wherein

R^a, R^b, R^c, R^d, and R^e are the same or different and are independently hydrogen, halogen, lower alkyl, optionally substituted phenyl or naphthyl, wherein the phenyl and naphthyl, are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, thiazolyl, pyrimidinyl, pyridyl, and hydroxy, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl and

naphthyl, wherein the aryl group is optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, thiazolyl, pyrimidinyl, pyridyl, and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, or

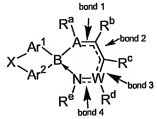
wherein R^a, R^b, R^c, R^d, and R^e may be connected by aromatic selected from phenyl, and naphthyl, aliphatic, heteroaromatic selected from thiazolyl, pyrimidinyl, and pyridyl, heteroaliphatic selected from piperidinyl, piperazinyl, morpholinyl, pyrrolidinyl, imidazolidinyl, oxazolidinyl, azepanyl, oxazaepanyl, oxepanyl, and oxadiazaepanyl ring structures or substituted embodiments thereof, where R^a is absent when A is O or S and R^d is absent when p = 0; with the proviso that if A is 0, then p is 1; and

Ar^1 and Ar^2 can be the same or different and are each independently phenyl, or naphthyl, substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, phenyl, naphthyl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl, and naphthyl, wherein the phenyl, and naphthyl, are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, thiazolyl, pyrimidinyl, pyridyl and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate,

and optionally

Ar^1 and Ar^2 may be cojoined to create a tricyclic scaffold, where X = C=O, CHOH, $(CH_2)_n$ (n = 0 to 2), -CH=CH-, NR^f (R^f = H, C_1-C_4 alkyl, phenyl, thienyl, or pyridyl), O, SO_n (n = 0 to 2), which have a plurality of positions with halogen, nitro, nitroso, lower alkyl, aryl selected from phenyl, and naphthyl, wherein the phenyl and naphthyl groups are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, thienyl, pyridyl, pyrimidinyl,

and hydroxy, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and



wherein

bond 1, bond 2, bond 3 and bond 4 are independently a single bond or a double bond, provided that when A is S or O, bind 1 is a single bond and where A is N, bond 1 is a double bond.

47. (New) A method according to claim 45, wherein

R^a, R^b, R^c, R^d, and R^e are the same or different and are independently hydrogen, halogen, lower alkyl, optionally substituted phenyl or naphthyl, wherein the phenyl and naphthyl are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, 1-imidazolyl, 2-thienyl, 1-, or 2- quinolinyl, 1-, or 2- isoquinolinyl, 1-, or 2-tetrahydroisoquinolinyl, 2- or 3- furanyl and 2- tetrahydrofuranyl, and hydroxy, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl, and naphthyl, or substituted aryl, wherein the aryl group is optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, 1-imidazolyl, 2-thienyl, 1-, or 2- quinolinyl, 1-, or 2- isoquinolinyl, 1-, or 2- tetrahydro isoquinolinyl, 2- or 3-furanyl and 2- tetrahydrofuranyl, and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, or

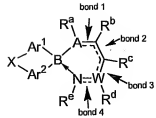
wherein R^a, R^b, R^c, R^d, and R^e may be connected by aromatic selected from phenyl,

and naphthyl, aliphatic, heteroaromatic selected 1-imidazolyl, 2-thienyl, 1-, or 2-quinolinyl, 1-, or 2- isoquinolinyl, 1-, or 2- tetrahydro isoquinolinyl, 2- or 3- furanyl and 2-tetrahydrofuranyl, heteroaliphatic selected from piperidinyl, piperazinyl, morpholinyl, pyrrolidinyl, imidazolidinyl, oxazolidinyl, azepanyl, oxazaepanyl, oxepanyl, and oxadiazaepanyl ring structures or substituted embodiments thereof, where R^a is absent when A is O or S and R^d is absent when p = 0; and

Ar^1 and Ar^2 can be the same or different and are each independently phenyl, or naphthyl, substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, phenyl, naphthyl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl, and naphthyl, wherein the phenyl, and naphthyl, are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, 1-imidazolyl, 2-thienyl, 1-, or 2- quinolinyl, 1-, or 2-isoquinolinyl, 1-, or 2- tetrahydro isoquinolinyl, 2- or 3- furanyl and 2- tetrahydrofuranyl and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate,

and optionally

Ar^1 and Ar^2 may be joined to create a tricyclic scaffold, where X = C=O, CHOH, $(CH_2)_n$ (n = 0 to 2), -CH=CH-, NR^f (R^f = H, C_1-C_4 alkyl, phenyl, thienyl, or pyridyl), O, SO_n (n = 0 to 2), which have a plurality of positions with halogen, nitro, nitroso, lower alkyl, aryl selected from phenyl, and naphthyl, wherein the phenyl and naphthyl groups are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, 1-imidazolyl, 2-thienyl, 1-, or 2- quinolinyl, 1-, or 2- isoquinolinyl, 1-, or 2- tetrahydro isoquinolinyl, 2- or 3- furanyl 2- tetrahydrofuranyl, and hydroxy, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and



wherein

bond 1, bond 2, bond 3 and bond 4 are independently a single bond or a double bond, provided that when A is S or O, bond 1 is a single bond and where A is N, bond 1 is a double bond.

48. (New) A method according to claim 45, wherein

Ar^1 and Ar^2 are both phenyl, each of which is optionally substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, phenyl, naphthyl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl and naphthyl, wherein the phenyl and naphthyl, are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio, trifluoromethyl, lower acyloxy, phenyl, naphthyl, thiazolyl, pyrimidinyl, pyridyl and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate.

49. (New) A method according to claim 45, wherein

Ar^1 and Ar^2 are both phenyl, each of which is optionally substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, phenyl, naphthyl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl selected from phenyl, and naphthyl,

wherein the phenyl, and naphthyl, are optionally substituted with 1, 2, or 3 groups that are selected from halogen, lower alkyl, lower alkoxy, lower alkylthio,

trifluoromethyl, lower acyloxy, phenyl, naphthyl, 1-imidazolyl, 2-thienyl, 1-, or 2-quinolinyl, 1-, or 2- isoquinolinyl, 1-, or 2- tetrahydroisoquinolinyl, 2- or 3-furanyl and 2- tetrahydrofuranyl and hydroxy, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate.

50. (New) A method according to claim 45, wherein

R^a, R^b, R^c, R^d, and R^e are connected by an aliphatic or heteroaromatic group selected from thienyl, furanyl, thiazolyl, imidazolyl, (is)oxazolyl, pyridyl, pyrimidinyl, (iso)quinolinyl, napthyridinyl, benzimidazolyl, and benzoxazolyl.

51. (New) A method according to claim 45, wherein

R^a, R^b, R^c, R^d, and R^e are connected by heteroaromatic group selected from pyridyl and quinolinyl, or substituted embodiments thereof.